

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with James A. Baker (Reg. No. 44,520) on August 6, 2009.

The application has been amended as follows:

*In the claims:*

1-4. (Cancelled)

5. (Currently Amended) A heat resistant masking tape, comprising: (1) a heat resistant backing film layer; and (2) a pressure-sensitive adhesive layer disposed on the heat resistant backing film layer, wherein the pressure-sensitive adhesive layer comprises a partially or fully cross-linked polymer resulting from: (a) polymerizing a polymerizable solution to yield a polymer dissolved in an organic solvent, said polymerizable solution consisting essentially of a polymerization initiator and a monomer mixture consisting of three distinct monomers in said organic solvent, the monomer mixture consisting of an alkyl (meth)acrylate monomer with an alkyl group having 4 to 15 carbon atoms, a glycidyl(meth)acrylate monomer and a (meth)acrylic acid monomer, the glycidyl(meth)acrylate monomer being present in an amount of 2 to 13% by weight of the total weight of monomers, the (meth)acrylic acid monomer being present in an amount of 1 to 7% by

weight of the total weight of monomers, and the alkyl (meth) acrylate monomer accounting for a balance of the total weight of monomers; (b) removing said solvent by drying; and (c) at least partially cross-linking said polymer by drying and optionally with additional heating, causing a reaction between a glycidyl group and carboxylic group in said polymer.

6. (New) The heat resistant masking tape according to claim 5, wherein said pressure-sensitive adhesive layer has a thickness of 0.5 to 100  $\mu\text{m}$ .

7. (New) The heat resistant masking tape according to claim 5, wherein said heat resistant backing film layer is selected from the group consisting of polyethylene terephthalate, polyethylene naphthalate, polyphenylene sulfide, and polyimide.

8. (New) The heat resistant masking tape according to claim 5, wherein said heat resistant backing layer has a thickness of 1 to 250  $\mu\text{m}$ .

9. (New) The heat resistant masking tape according to claim 5, wherein a first surface of the heat resistant backing film layer is surface treated.

10. (New) The heat resistant masking tape according to claim 9, wherein a second surface of the heat resistant backing film layer opposite the first surface is treated with a release agent.

\* \* \* \* \*

**DETAILED ACTION**

***Pending Claims***

Claims 5-10 are pending.

***Response to Amendment***

1. The declaration under 37 CFR 1.132 filed June 3, 2009 is sufficient to overcome the following rejection(s):

- The rejection of claim 5 under 35 U.S.C. 102(e) as being anticipated by Takeda et al. (WO 03/064552 A1).
- Any potential prior art rejection of claims 6-10 over Takeda et al. (WO 03/064552 A1).

Takeda et al. (WO 03/064552 A1) has been disqualified as prior art.

***Effect of the Examiner's Amendment***

2. The rejection of claims 1, 2, and 4 under 35 U.S.C. 102(e) as being anticipated by Takeda et al. (WO 03/064552 A1) has been rendered moot by the cancellation of these claims.

3. The rejection of claims 1, 2, and 4 under 35 U.S.C. 103(a) as being unpatentable over Yamanaka et al. (US 2003/0124346) in view of Zhou et al. (US 2002/0132111) has been rendered moot by the cancellation of these claims.

4. The rejection of claim 5 under 35 U.S.C. 103(a) as being unpatentable over Yamanaka et al. (US 2003/0124346) in view of Zhou et al. (US 2002/0132111) has been overcome by amendment.

5. The rejection of claims 1 and 4 under 35 U.S.C. 103(a) as being unpatentable over Lehmann et al. (US Pat. No. 4,038,454) in view of Zhou et al. (US 2002/0132111) has been rendered moot by the cancellation of these claims.
6. The rejection of claim 5 under 35 U.S.C. 103(a) as being unpatentable over Lehmann et al. (US Pat. No. 4,038,454) in view of Zhou et al. (US 2002/0132111) has been overcome by amendment.
7. The rejection of claim 2 under 35 U.S.C. 103(a) as being unpatentable over Lehmann et al. (US Pat. No. 4,038,454) in view of Zhou et al. (US 2002/0132111) and Yamanaka et al. (US 2003/0124346) has been rendered moot by the cancellation of this claim.

***Allowable Subject Matter***

8. Claims 5-10 are allowed.
9. The following is an examiner's statement of reasons for allowance:

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

The pressure-sensitive adhesive layer of the instantly claimed masking tape now comprises a partially or fully cross-linked polymer resulting from:

(a) polymerizing a polymerizable solution to yield a polymer dissolved in an organic solvent, said polymerizable solution consisting essentially of:

- a polymerization initiator and

- a monomer mixture consisting of three distinct monomers, the monomer mixture consisting of:
  - a glycidyl(meth)acrylate monomer being present in an amount of 2 to 13% by weight of the total weight of monomers, and
  - a (meth)acrylic acid monomer being present in an amount of 1 to 7% by weight of the total weight of monomers, and
  - an alkyl (meth)acrylate monomer with an alkyl group having 4 to 15 carbon atoms, accounting for a balance of the total weight of monomers;

(b) removing said solvent by drying; and

(c) at least partially cross-linking said polymer by drying and optionally with additional heating, causing a reaction between a glycidyl group and carboxylic group in said polymer.

The previously cited art fails to reasonably teach or suggest the instantly claimed pressure sensitive adhesive layer:

- Yamanaka et al. (US 2003/0124346 A1) feature a surfactant material in their reactive mixture that is chemically incorporated into the adhesive (co)polymer (*see pages 6-7 of Applicants' response filed June 3, 2009*). Furthermore, their polymer is cross-linked with a separate reactive cross-linking agent (*see paragraphs 0008-0015, 0025, 0067-0070*).
- Lehmann et al. (US Pat. No. 4,038,454) feature a polymer formed from a blend of four monomer components (*see page 8 of Applicants' response filed June 3, 2009; Example 4 of Lehmann et al.*).
- Schumann et al. (US 2002/0114948 A1 & US 2001/0055679 A1) feature a polymer formed from a blend of four monomer components (*see Example 4 of Schumann et al.*).

Furthermore, it appears that their polymer is cross-linked with a separate reactive cross-linking agent.

- Liu et al. (US Pat. No. 4,762,747) feature a polymer formed from a blend of four monomer components (*see Comparative Example 1*). Furthermore, it is not clear if the resulting material is a pressure-sensitive adhesive.
- Knapp (US Pat. No. 3,284,423) features a polymer formed from a blend of four monomer components (*see Example 1*).

Lastly, Takeda et al. (WO 03/064552 A1) disclose the instant invention. However, Applicants have successfully disqualified this reference as prior art: it was disqualified under 102(a) with perfection of their foreign priority claim; and it was disqualified under 102(e) with the declaration filed on June 3, 2009.

***Communication***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is (571)272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Feely/  
Primary Examiner, Art Unit 1796

August 14, 2009